

CONTROLLED LEAKAGE CMOS DECOUPLING CAPACITOR FOR APPLICATION
SPECIFIC INTEGRATED CIRCUIT LIBRARIES

Abstract of the Disclosure

5 A decoupling capacitor includes a fixed resistance in series with the capacitor, the resistance formed by contacts connecting a polysilicon layer to metal and a diffusion layer to metal; the contacts being of location and quantity sufficient for limiting defect current while allowing the
10 capacitor to function at high frequency. N pairs of contacts in at least two sets of contacts are separated by a distance K sufficient to achieve a leakage limiting resistance of R and a bandwidth limiting resistance of R/2.